REMARKS

The Examiner is thanked for performing a thorough search. In this reply, Claims 1, 12, and 14-26 have been amended. Claims 1-26 are pending in the application.

CLAIM REJECTIONS—35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1 and 12 were rejected under 35 U.S.C. §112, second paragraph as being indefinite, allegedly, "for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention." Specifically, the Office Action asserted that "it is not well-known in the art how data types have unique memory addresses associated with them."

Regardless of the correctness of this assertion, neither Claim 1 nor Claim 12 recites that a data type has a unique memory address associated with it. Claim 1 recites that one or more routines are associated with a type of data, but these routines are not "memory addresses." Claim 12 recites that one or more routines are associated with a type definition, but these routines are not "memory addresses." The claims do not possess the deficiencies that the Office Action alleges that the claims possess. Additionally, the detailed description explains how "a type of data" or "a type definition" may be associated with one or more routines.

For at least the above reasons, the Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §112, second paragraph.

CLAIM REJECTIONS—35 U.S.C. § 101

Claims 1, 12, and 14-26 were rejected under 35 U.S.C. § 101 because the claims are allegedly directed to non-statutory subject matter.

The Office Action rejected Claims 14-26 under 35 U.S.C. § 101 specifically because the claims' scope encompassed "transmission media," which the Office Action deemed to be intangible, and therefore allegedly non-statutory, subject matter. Claims 14-26 have been amended to recite a "computer-readable **storage** medium." Applicants respectfully submit that this amendment remedies the alleged deficiencies of Claims 14-26 under 35 U.S.C. § 101.

The Office Action rejected Claims 1 and 12 under 35 U.S.C. § 101 specifically because the methods recited therein allegedly failed to produce a concrete result. However, Claims 1 and 12 both recite the step of "writing said data into one or more data blocks in said database." Applicants respectfully submit that such data, written into a database, constitutes a concrete result.

The Office Action also rejected Claims 1 and 12 under 35 U.S.C. § 101 specifically because the methods recited therein recited steps in which a program performed steps in response to one or more routines being invoked or called, without expressly reciting steps of "invoking" or "calling" the one or more routines in the first place. Applicants do not believe that 35 U.S.C. § 101 requires the claims to recite, expressly, steps that the claims imply. Nevertheless, in the interest of expediting prosecution, the Applicants have amended Claims 1 and 12 to expressly recite steps of "invoking" and "calling," respectfully, the one or more routines recited in those claims.

For at least the above reasons, the Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §101.

CLAIM REJECTIONS—NONSTATUTORY DOUBLE PATENTING

Claims 1-26 were provisionally rejected under the judicially created doctrine of double patenting over Claims 1-16 of copending U.S. Publication No. U.S. 2005/0050058 ("Jain").

Jain and the present application are assigned to the same entity and were filed on the same day. A terminal disclaimer, which should serve to obviate the double patenting rejection, has been filed with this reply.

For at least the above reasons, the Applicants respectfully request the withdrawal of the nonstatutory double patenting rejections.

CLAIM REJECTIONS—35 U.S.C. § 102(b)

Claims 1-26 were rejected under 35 U.S.C. 102(b) as being anticipated, allegedly, by U.S. Patent No. 6,085,198 ("Skinner"). The rejections are respectfully traversed for at least the reasons discussed below.

Claim 1

Among other features, Claim 1 recites, "determining one or more second values that correspond to one or more hidden columns of one or more tables in said database." The Office Action alleges that Skinner discloses this feature in col. 20, lines 24-27, which read, "MetaMember 502 comprises an integer data structure containing 'myPrivateFlag.' 'myPrivateFlag' describes the private and protected state of the class element described by MetaMember 502."

Despite the private accessibility mode of the class element described by MetaMember 502 within an object-oriented class, and assuming that this element even corresponded to a database table column (which the cited portion does not seem to indicate), it does not logically follow solely from the accessibility mode of this element that such a database column would necessarily need to be a "hidden" column. Although this element might need to be declared as "private" in order to prevent subclasses of the class in which the element is declared from accessing the element, there is no reason to assume that the data stored in the element would also need to be obscured from query results or made invisible to a user by storing the data in a hidden column of a database table. As used in the Skinner, "private" refers to the fact that the element cannot be accessed by subclasses that extend the class in which the element is declared; in this context, "private" does **not** mean that the element or its associated data should be obscured from a user. An element's accessibility to subclasses really has nothing at all to do with whether data that corresponds to that element should be stored in a hidden column of a database table.

The fact that an element is declared to be "private" or "protected" within a class does not mean that a database table column that stores data associated with that element is "hidden" by definition. A database column that is *not* hidden might store data that is associated with an element that is declared to be "private." Conversely, a hidden column might store data that is associated with an element that *not* declared to be "private."

One of ordinary skill in the art understands what is meant by "hidden columns of one or more tables in said database" as recited in Claim 1 and described in the present application. As is described in paragraph [0040] of the present application, "hidden columns store values that are not displayed to a user when the database table that contains the hidden columns is queried."

The claims **must** be interpreted in light of the detailed description. In the art of database technology, "hidden column" has a well-defined, well-understood meaning that vastly differs from the meaning that the Office Action ascribes. There is no more precise language that the Applicants can use to explain what they mean. The word "hidden" should not be taken to mean "stores data that is associated with an element that is declared to be private," because the privacy of an element has nothing to do with whether values that correspond to that element should be displayed when a database table that stores those values is queried.

Furthermore, the Office Action cites no portion of Skinner that says anything about hidden columns of database tables. Therefore, Skinner fails to teach, disclose, or suggest "determining one or more second values that correspond to one or more hidden columns of one or more tables in said database" as recited in Claim 1.

Additionally, Claim 1 recites, "generating . . . a data stream that conforms to a format of data blocks of said database." The Office Action alleges that Skinner discloses this feature in col. 31, lines 1-2, which read, "public void set <attributeName> (<dataTypeJavaInterfaceDeclaration> <attributeName>)." This does not say or imply anything about whether a data stream **conforms to a format of data blocks of a database**. Even if this code has something to do with generating a data stream, the cited text provides no support for the notion that the data stream conforms to any specific format, let alone the format of a database's data blocks. Therefore, Skinner fails to teach, disclose, or suggest "generating . . . a data stream that conforms to a format of data blocks of said database" as recited in Claim 1.

For at least the above reasons, the Applicants respectfully submit that Claim 1 is patentable over Skinner under 35 U.S.C. § 102(b).

Claim 12

Among other features, Claim 12 recites, "a client application receiving data that conforms to a first type definition that indicates two or more first attributes, wherein at least one of said two or more first attributes is of a type that is defined by a second type definition that indicates two or more second attributes." In other words, Claim 1 requires that at least one of the multiple attributes of the type to which the data conforms must itself be of a type that comprises multiple attributes (i.e., a "complex" type). The Office Action alleges that Skinner discloses this feature in col. 16, lines 48-49, which read, "In step 400, the schema describing the data classes to be used in the system is obtained." The cited text does not indicate that the data classes have the specific qualities of the data recited in Claim 1.

Additionally, like Claim 1, Claim 12 recites, "generating . . . a data stream that conforms to a format of data blocks of said database." Again, the Office Action alleges that Skinner discloses this feature in col. 31, lines 1-2, which read, "public void set <attributeName> (<dataTypeJavaInterfaceDeclaration> <attributeName>)." As is discussed above in relation to Claim 1, this does not say or imply anything about whether a data stream **conforms to a format of data blocks of a database**. Therefore, Skinner fails to teach, disclose, or suggest "generating . . . a data stream that conforms to a format of data blocks of said database" as recited in Claim 12.

For at least the above reasons, the Applicants respectfully submit that Claim 12 is patentable over Skinner under 35 U.S.C. § 102(b).

Claim 5

Claim 5 depends from Claim 1, and further recites "wherein at least one of said one or more second values **describe a position** of said one or more first values relative to other values in said data." The Office Action alleges that Skinner discloses this feature in col. 20, lines 7-9, which read "'myPassedMethods' is a Vector of MetaMethod instances passed by other MetaClasses to the current MetaClass instance." This text says nothing about one value describing a position of another value within data. For at least the above reasons, the Applicants respectfully submit that Claim 5 is patentable over Skinner under 35 U.S.C. § 102(b).

Claim 8

Claim 8 depends from Claim 1 and further recites "wherein said generating and said writing are performed without causing a Structured Query Language (SQL) engine to load said data." The "writing" to which Claim 8 refers is "writing said data into one or more data blocks **in said database**" as recited in Claim 1.

The Office Action alleges that Skinner discloses this feature in col. 18, lines 8-12, which read "By compiling the schema file and executing the method calls, the schema metadata may be extracted and loaded directly into the desired data structures, with the desired flags automatically set in accordance with the specified methods." However, this text does **not** refer to loading data into a **database**. No part of this text refers to a database. In this text, "desired data structures" does not refer to structures within a database. Instead, this text refers to storing metadata (extracted from a schema) into "metadata structures;" the metadata thus extracted and stored may be applied later to "table generation processes" (col. 17, lines 56-61). The "loading" is

performed **prior** to the generation of tables in a database; therefore, the loading cannot refer to the loading of data **into** a database.

Thus, even if the schema metadata is "extracted and loaded directly" into the "desired data structures," and if the metadata were later stored in a database, there is no reason to believe that the storage into the database would be accomplished through any mechanisms other than SQL commands issued to an SQL engine. Skinner does not indicate, anywhere, that data is written into a database "without causing a Structure Query Language (SQL) engine to load said data." Such a feature cannot be inferred from the portions of Skinner that the Office Action cites in the rejection of Claim 8.

For at least the above reasons, the Applicants respectfully submit that Claim 8 is patentable over Skinner under 35 U.S.C. § 102(b).

Remaining Dependent Claims

The remaining dependent claims not specifically discussed above depend from either Claim 1 or Claim 12. Therefore, these remaining claims inherit the features of Claim 1 or Claim 12 that have been distinguished from Skinner above. Applicants respectfully submit that the remaining dependent claims also are patentable over Skinner under 35 U.S.C. § 102(b).

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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Dated: 7/10/06

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on 7/11/06 by Annette Valdivia
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